

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE 2004/002018

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7: H04L 25/52, H04B 7/14, H04Q 7/32**  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

**IPC7: H04B, H04L, H04Q**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**SE,DK,FI,NO classes as above**

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**EPO-INTERNAL, WPI DATA, PAJ, INSPEC**

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SRENG, Van Morning. "Coverage enhancement through two-hop relaying in cellular radio systems". Carleton University, Ottawa, Ontario, 2002, see section 3.3, pages 32-39. --	1-30
P,A	WO 2004107693 A1 (TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)), 9 December 2004 (09.12.2004), page 24, line 7 - page 28, line 8, figures 4,6 --	1-30

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 March 2005	18-04-2005
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86	Authorized officer  Fredrik Blomqvist /OGU Telephone No. + 46 8 782 25 00

## INTERNATIONAL SEARCH REPORT

International application No. PCT/SE 2004/002018
---

## C (Continuation): DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	ZHANG, J. et al. "Adaptive optimal transmit power allocation for two-hop non-regenerative wireless relaying system". In: 2004 IEEE 59TH VEHICULAR TECHNOLOGY CONFERENCE, 2004. VTC 2004-SPRING. 17-19 May 2004, Vol. 2, pages 1213-1217, ISSN: 1550-2252, Inspec AN: 8274474, see section III.  --	1-30
A	SCAGLIONE, A. et al. "Opportunistic large arrays: cooperative transmission in wireless multihop ad hoc networks to reach far distances". In: IEEE TRANSACTIONS ON SIGNAL PROCESSING, August 2003, Vol. 51, Issue 8, ISSN: 1053-587X, Inspec AN: 7697324, see section III  --	1-30
A	LANEMAN, J.N. et al. "Distributed space-time-coded protocols for exploiting cooperative diversity in wireless networks". IEEE TRANSACTIONS ON INFORMATION THEORY, October 2003, Vol. 49, Issue 10, pages 2415-2425, ISSN: 0018-9448, Inspec AN: 7766004, see sections III-IV.  -- -----	1-30

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

01/03/2005

PCT/SE 2004/002018

WO	2004107693	A1	09/12/2004	US	20040266339 A	30/12/2004
				US	20050014464 A	20/01/2005
				WO	2004107694 A	09/12/2004